

Safety Data Sheet

1. Identification of the substance/mixture and of the company/undertaking

Product identifier:

Product name: Tritolyl phosphate

Product code(SDS NO): 84155jis_J_E1-1

Details of the supplier of the safety data sheet

Manufacturer/Supplier: JUNSEI CHEMICAL CO., LTD.

Address: 1-6, Ohmano-Cho, Koshigaya, Saitama 343-0844, Japan

Division: Quality Assurance Department

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2. Hazards identification

GHS classification and label elements of the product

Classification of the substance or mixture

HEALTH HAZARDS

Reproductive toxicity: Category 1B

Specific target organ toxicity – single exposure: Category 1(nervous system)

Specific target organ toxicity – repeated exposure: Category 1(nervous system)

Specific target organ toxicity – repeated exposure: Category 2(adrenal gland)

ENVIRONMENT HAZARDS

Hazardous to the aquatic environment – acute hazard: Category 1

(Note) GHS classification without description: Not applicable/Out of classification/Not classifiable

Label elements



Signal word: Danger

HAZARD STATEMENT

May damage fertility or the unborn child

Causes damage to nervous system after single exposure

Causes damage to nervous system through prolonged or repeated exposure

May cause damage to adrenal gland through prolonged or repeated exposure

Very toxic to aquatic life

PRECAUTIONARY STATEMENT

Prevention

Do not handle until all safety precautions have been read and understood.

Avoid release to the environment.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash contaminated parts thoroughly after handling.

Use personal protective equipment as required.

Do not eat, drink or smoke when using this product.

Response

Collect spillage.

Get medical advice/attention if you feel unwell.

Storage

Store locked up.

Disposal

Dispose of contents/container in accordance with local/national regulation.

3. Composition/information on ingredients

Substance/Mixture:

Substance

Common name, synonyms: Tricresyl phosphate

Ingredient name: Tritolyl phosphate

Chemical formula: $C_{21}H_{21}O_4P$

Chemicals No, Japan: 3-2522; 3-2613; 3-3363

CAS No.: 1330-78-5

MW: 368.37

ECNO: 215-548-8

4. First-aid measures

Descriptions of first-aid measures

General measures

Get medical attention/advice if you feel unwell.

IF INHALED

Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER or doctor/physician if you feel unwell.

IF ON SKIN (or hair)

Take off immediately all contaminated clothing. Rinse skin with water/shower.

If skin irritation or rash occurs: Get medical advice/attention.

IF IN EYES

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

IF SWALLOWED

Rinse mouth.

Call a POISON CENTER or doctor/physician if you feel unwell.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

In case of fire, use foam, dry powder, CO₂.

Unsuitable extinguishing media

Water may be effective for cooling, but may not effect extinguishment.

Specific hazards arising from the substance or mixture

Containers may explode when heated.

Fire may produce irritating, corrosive and/or toxic gases.

Runoff from fire control or dilution water may cause pollution.

Advice for firefighters

Specific fire-fighting measures

Evacuate non-essential personnel to safe area.

Cool container with water spray.

Special protective equipment and precautions for fire-fighters

Wear fire/flame resistant/retardant clothing.

Wear protective gloves/protective clothing/eye protection/face protection.

Firefighters should wear self-contained breathing apparatus with full face piece operated

positive pressure mode.

6. Accidental release measures

Personnel precautions, protective equipment and emergency procedures

Ventilate area after material pick up is complete.

Wear proper protective equipment.

Environmental precautions

Avoid release to the rivers, lakes, ocean, groundwater.

Methods and materials for containment and cleaning up

Absorb spill with inert material (dry sand, earth, et al), then place in a chemical waste container.

Preventive measures for secondary accident

Collect spillage.

7. Handling and storage

Precautions for safe handling

Preventive measures

(Exposure Control for handling personnel)

Do not breathe dust/fume/gas/mist/vapors/spray.

(Protective measures against fire & explosion)

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

Exhaust/ventilator

Exhaust/ventilator should be available.

Safety treatments

Avoid contact with skin.

Avoid contact with eyes.

Avoid breathing dust, vapor, mist, or gas.

Safety Measures/Incompatibility

Do not handle until all safety precautions have been read and understood.

Wear protective gloves, protective clothing or face protection.

Use personal protective equipment as required.

When using do not eat, drink or smoke.

Conditions for safe storage, including any incompatibilities

Recommendation for storage

Store in a well-ventilated place. Keep container tightly closed.

Keep cool. Protect from sunlight.

Store locked up.

8. Exposure controls/personal protection

Exposure controls

Appropriate engineering controls

Do not use in areas without adequate ventilation.

Eye wash station should be available.

Washing facilities should be available.

Individual protection measures

Respiratory protection

Wear respiratory protection.

Hand protection

Wear protective gloves.

Eye protection

Wear eye/face protection.

Safety and Health measures

Wash ... thoroughly after handling.

Do not eat, drink or smoke when using this product.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical properties

Appearance: Liquid

Color: Colorless ~ Pale yellow

Odor: None

pH data N.A.

Phase change temperature

Initial Boiling Point/Boiling point: 420°C

Melting point/Freezing point: -33°C

Decomposition temperature data N.A.

Flash point: (c.c.) 225°C

Auto-ignition temperature: 410°C

Explosive properties data N.A.

Vapor pressure data N.A.

Vapor density data N.A.

Specific gravity/Density: 1.170 ~ 1.180 (20/20°C)

Solubility

Solubility in water: 0.36 mg/L (25°C)

n-Octanol /water partition coefficient: log Pow 5.11

10. Stability and Reactivity

Chemical stability

Stable under normal storage/handling conditions.

Conditions to avoid

Contact with incompatible materials.

Open flames. Heat.

Incompatible materials

Strong oxidizing agents

Hazardous decomposition products

Carbon oxides, Phosphorus oxides

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[GHS Cat. Japan, base data]

rat LD50 = 5190 mg/kg (EHC 110, 1990)

Acute toxicity (Dermal)

[GHS Cat. Japan, base data]

rabbit LD50 > 7900 mg/kg (EHC 110, 1990)

Irritant properties

Skin corrosion/irritation

[GHS Cat. Japan, base data]

guinea pig : It has been reported that although o- and p-objects moderately irritated and m-object slightly irritated the skin of guinea pig, there was no irritation to isomer mixture (EPA_JP risk assessment vol.4, 2005).

No Allergenic and sensitizing effects data available

No Mutagenic effects data available

No Carcinogenic effects data available

Reproductive toxicity

[GHS Cat. Japan, base data]

cat.1B; EHC 110, 1990

Delayed and immediate effects and also chronic effects from short- and long-term exposure

STOT

STOT-single exposure

[cat.1]

[Japan published data]

nerve/nervous system (EHC 110, 1990)

STOT-repeated exposure

[cat.1]

[Japan published data]

nerve/nervous system (EPA_JP risk assessment vol.4, 2005)

[cat.2]

[Japan published data]

adrenal (NTP TR433, 1994)

No Aspiration hazard data available

12. Ecological Information

Toxicity

Aquatic toxicity

Very toxic to aquatic life

Aquatic acute toxicity component(s) data

[GHS Cat. Japan, base data]

Fish(bluegill) LC50 = 0.15mg/L/96hr (EPA_Japan, risk assessment, 2003)

Water solubility

0.36mg/L (25°C) (PHYSPROP Database)

Persistence and degradability

Rapid degradability(Registered chemicals data check & review, Japan)

Bioaccumulative potential

BCF=165 (EPA_Japan, risk assessment 2003); log Pow = 5.11(PHYSPROP Database)

13. Disposal considerations

Waste treatment methods

Avoid release to the environment (– if this is not the intended use).

Dispose of contents/container in accordance with local/national regulation.

14. Transport Information

UN No, UN CLASS

UN number: 2574

UN proper shipping name: TRICRESYL PHOSPHATE with more than 3% ortho isomer

Transport hazard class(es): 6.1

Packing group: II

ERG GUIDE NO.: 151

Transport in bulk according to Annex II of MARPOL73/78 and IBC Code

Noxious Liquid ; Cat. Y...Tritolyl phosphate

15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

US major regulations

TSCA

Tritolyl phosphate

Other regulatory information

We are not able to check up the regulatory information in regard to the substances in your country or region, therefore, we request this matter would be filled by your responsibility.

Regulatory information with regard to this substance in your country or in your region should be examined by your own responsibility.

Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

16. Other information

GHS classification and labelling

Repr. 1B: H360 May damage fertility or the unborn child

STOT SE 1: H370 Causes damage to nervous system after single exposure

STOT RE 1: H372 Causes damage to nervous system through prolonged or repeated exposure

STOT RE 2: H373 May cause damage to adrenal gland through prolonged or repeated exposure

Aquatic Acute 1: H400 Very toxic to aquatic life

Reference Book

Globally Harmonized System of classification and labelling of chemicals, (5th ed., 2013), UN

Recommendations on the TRANSPORT OF DANGEROUS GOODS 18th edit., 2013 UN

Classification, labelling and packaging of substances and mixtures (table3-1 ECNO6182012)

2012 EMERGENCY RESPONSE GUIDEBOOK(US DOT)

2015 TLVs and BEIs. (ACGIH)

<http://monographs.iarc.fr/ENG/Classification/index.php>

Supplier's data/information

Chemical Risk Information Platform (CHRIP)(NITE) <http://www.safe.nite.go.jp/japan/db.html>

GHS Classification Guidance for Enterprises 2013 Revised Edition (August, 2013, METI)

General Disclaimer

This information contained in this data sheet represents the best information currently available to us. However, no warranty is made with respect to its completeness and we assume no liability resulting from its use. It is advised to make their own tests to determine the safety and suitability of each such product or combination for their own purposes.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.

The GHS classification data given here is based on current Japan official data (NITE published in 2014).